

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/21701

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B01D 57/02; C12Q 1/68; C12P 19/34; C07H 21/02, 21/04; G01N 33/53, 33/543
US CL : 422/68.1; 435/4, 6, 7.1, 7.9, 7.92, 287.1; 436/518-532

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 422/68.1; 435/4, 6, 7.1, 7.9, 7.92, 287.1; 436/518-532

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Derwent, STN

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, STN

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, E	US 6,627,400 B1 (SINGH et al) 30 September 2003 (30.09.2003), whole document.	1-37
A,P	US 6,514,700 B1 (SINGH) 04 February 2003 (04.02.2003), whole document.	1-37
A,E	US 2003/0170915 A1 (SINGH et al) 11 September 2003 (11.09.2003), whole document.	1-37
Y,P	US 2003/0013126 A1 (SINGH et al) 16 January 2003 (16.01.2003), whole document.	1-37
A	US 6,322,980 B1 (SINGH) 27 November 2001 (27.11.2001), whole document.	1-37

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

Special categories of cited documents:	
* "A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

Date of mailing of the international search report

10 December 2003 (10.12.2003)

29 DEC 2003

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Authorized officer

Karic Padmanabhan

Facsimile No. (703)305-3230

Telephone No. 703-308-0196